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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/852,383 | 05/10/2001 | Hiroshi Mori | AD6588 US CNT | 5612 |

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E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
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WILMINGTON, DE 19805

EXAMINER

RAJGURU, UMAKANT K

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1711

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DATE MAILED: 02/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-38 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-38 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2 Interview Summary, PTO-413
- ☒ Notice of References Cited, PTO-892 Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 Other _____

Office Action Summary

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1. Claims 1-38 are under examination.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-17, 28, 29 and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al (USP 5866671) in view of Gibbs (USP 3406223) and Fukumoto et al (USP 5603927).

(Shinohara is of record on PTO -1449, paper 2 Fukumoto has been cited in parent application, ser. no. 09/287432. Gibbs is of record on PTO-1449 in the same application, viz ser. no. 09/287432).

Shinohara discloses a resin composition for use in applications requiring low formaldehyde concentration levels. It comprises a polyacetal polymer (abstract) and an organic cyclic compound with active imino groups (col. 3, lines 43-60). Few additives like lubricant, antioxidant etc. can be added to this composition (col. 4, line 24 to col. 6, line 56). Molded parts may be formed from this composition (col. 6, lines 57-62). Organic cyclic compound is added at 0.05 to 3.0% by wt (col. 10, lines 31-33).

Shinohara fails to disclose the use of amino compound (of instant claim 1).

Gibbs discloses stabilized polyoxymethylenes, which are stabilized by mixing a polyoxymethylene with a superpolyamide, a phenolic antioxidant and one or more substituted aliphatic amines (col 1, line 71 to col. 2, line 3). Suitable amines are shown in col. 2, lines 43-67 and they read on the instantly claimed ones (of instant claim 4).

Fukumoto discloses a material for removing offensive odors, which is especially effective in removing aldehydes (col. 6, lines 1-3). An acid salt of ethyl p-aminobenzoate is a suitable active compound of the said material (col. 9, lines 13-14) (see instant claim 5). According to patentee, substances having a basicity constant pK_b of 9.4 or more are preferred (col. 4, lines 31-33).

Therefore it would have been obvious to use amino compounds of Gibbs and in particular the amino benzoate of Fukumoto in the composition of Shinohara in order to remove or minimize the offensive formaldehyde odor.

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4. Claims 18-22, 30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al (USP 5866671) in view of Minagawa^W et al (USP 4798836).

Disclosure of Shinohara is presented earlier.

Shinohara fails to mention succinimide (of instant claim 18).

Minagawa discloses diimides as light stabilizers for polymers, one of them being polyacetals (col. 11, line 43). Succinimide is a preferred stabilizer (col. 4, lines 10-30).

It would therefore have been obvious to use a succinimide as a stabilizer in the composition of Shinohara because succinimides are less volatile and less extractable by water and thereby they offer better stabilization.

5. Claims 23-27, 31 & 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al in view of Adesunloye et al (USP 5874106).

Disclosure a Shinohara is presented earlier.

Shinohara fails to disclose any of the amino benzoic acids of instant claim 23.

Adesunloye discloses filled gelatine capsules wherein the crosslinking in the gelatin shell is reduced by incorporating an amino acid and a carboxylic acid (abstract; col. 1, lines 7-156). Suitable amino acids listed in col 9, lines 45-55, read on the instantly claimed ones (see instant claim 23).

It would therefore have been obvious to use the amino acids of Adesunloye in the composition of Shinohara to enhance stability of composition. It is true that Adesunloye does not specifically mention (claimed) 2-aminobenzoic acid (ie anthranilic acid) and 4-aminobenzoic acid. Nevertheless it is within the expertise of a person of

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ordinary skill in the art to infer, from teachings of Adesunloye that ortho and meta

UKR ⁱaminobenzoic acid should work equally well as (disclosed) para amino benzoic acid.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to U. K. Rajguru whose telephone number is (703) 308-3224. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

UKR
U.K. Rajguru/om
January 17, 2002
January 24, 2002

In U.K.